

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS

1. (currently amended) An apparatus adapted for treating ~~or processing~~ at least one substrate/workpiece in a plasma, comprising:

(a) a chamber defining an interior space;

(b) ~~means~~ a component for generating a plasma in said interior space of said chamber;

(c) a mounting ~~means~~ component adapted for positioning at least one substrate/workpiece in said interior space of said chamber for receiving treatment in said plasma; ~~and~~

(d) a gas supply ~~means~~ component for injecting ~~gas(es)~~ at least one gas into said interior space of said chamber, comprising:

(i) an inlet portion extending exteriorly of said chamber;

(ii) an outlet portion extending into said chamber and including a pair of arcuately--shaped tubular gas outlet ~~portions~~ elements for injecting ~~gas(es)~~ at least one gas into said interior space; and

(iii) an electrically insulating sleeve located at an opening in a wall of said chamber between said inlet portion and said outlet portion;

~~(iii)~~ (e) ~~means~~ a component for applying a bias potential to said gas supply ~~means~~ component for suppressing plasma formation at said outlet ~~portions~~ elements, wherein said ~~means~~ component for applying a bias potential is electrically isolated from said ~~means~~ component for generating a plasma[[7]]; and

~~wherein said apparatus comprises~~ (f) a spaced-apart pair of cathode/target assemblies ~~and wherein~~ said mounting ~~means~~ component positions at least one substrate/workpiece in the space between said pair of cathode/target assemblies, and said arcuately-shaped tubular gas outlet ~~portions~~ elements are positioned between said spaced-apart pair of cathode/target assemblies.

2. (currently amended) The apparatus ~~as in~~ of claim 1, ~~further comprising:~~

(e) ~~means for electrically isolating~~ wherein said electrically insulating sleeve electrically isolates said gas supply ~~means~~ component from said chamber and said ~~means~~ component for generating said plasma.

3. (currently amended) The apparatus ~~as in~~ of claim 2, wherein ~~[[÷]]~~ said outlet portion of said gas supply ~~means~~ component extends through an electrically insulated opening in a wall of said chamber.

4. (currently amended) The apparatus ~~as in~~ of claim 1, wherein~~[[÷]]~~ said ~~means~~ component for applying said bias potential comprises ~~means~~ a component for applying one of a DC, AC, ~~or~~ and RF bias potential.

5. (currently amended) The apparatus ~~as in~~ of claim 4, wherein~~[[÷]]~~ said ~~means~~ component for applying said bias potential comprises ~~means~~ a component for applying a selected polarity DC bias potential of up to about 1,000 V.

6. (currently amended) The apparatus ~~as in~~ of claim 1, wherein ~~[[:]~~ said interior space of said chamber is adapted to be maintained at a reduced pressure.

7. (currently amended) The apparatus ~~as in~~ of claim 1, wherein said apparatus is adapted to perform a plasma treatment ~~or process~~ selected from the group consisting of ~~[[:]~~sputter etching, reactive sputter etching, sputter deposition, and reactive sputter deposition.

8. (currently amended) The apparatus ~~as in~~ of claim 7, wherein said apparatus is adapted to perform one of a sputter deposition ~~or~~ and a reactive sputter deposition ~~process operation~~.

9. (canceled)

10. (canceled)

11. (currently amended) A method of treating ~~or processing~~ at least one substrate/workpiece in a ~~plasma~~ chamber, comprising steps of:

(a) electrically insulating an opening in a wall of said chamber between portions of a gas supply component using an electrically insulating sleeve;

(b) mounting/positioning at least one substrate/workpiece between a spaced-apart pair of cathode/target assemblies in said interior space of said chamber;

(c) injecting ~~gas(es)~~ at least one gas between said spaced-apart pair of cathode/target assemblies ~~by means of an electrically isolated using said gas supply means component having~~ wherein said gas supply component comprises a pair of arcuately-shaped tubular gas outlet

portions;

(d) generating a plasma in said interior space of said chamber via said ~~means~~ component for generating a plasma;

(e) applying a bias potential to said gas supply ~~means~~ component to suppress plasma formation at said at least one outlet orifice, wherein said gas supply ~~means~~ component is electrically isolated from ~~said means~~ a component for generating a plasma; and

(f) treating/processing said at least one substrate/workpiece in said plasma.

12. (currently amended) The method according to claim 11, wherein:

~~step (a) comprises providing an apparatus wherein~~ said chamber is adapted to be maintained at a reduced pressure.

13. (currently amended) The method according to claim 12, wherein:

~~step said (a) comprises providing an apparatus~~ component for generating a plasma is adapted to perform a plasma treatment ~~or process~~ selected from the group consisting of ~~[[÷]]~~ sputter etching, reactive sputter etching, sputter deposition, and reactive sputter deposition.

14. (currently amended) The method according to claim 13, wherein:

~~step said (a) comprises providing an apparatus~~ component for generating a plasma is adapted to perform one of a sputter deposition ~~or and~~ a reactive sputter deposition ~~process~~ operation.

15. (canceled)

16. (currently amended) The method according to claim 14, wherein:

~~step~~ said (b) comprises mounting/positioning at least one disk-shaped substrate/workpiece for one of a magnetic ~~or~~ and a magneto-optical (MO) recording medium.

17. (currently amended) The method according to claim 16, wherein:

~~step~~ said (f) comprises reactive sputtering of a ferromagnetic target material in an oxygen containing plasma to deposit an oxygen-containing ferromagnetic layer on each surface of said at least one substrate/workpiece.

18. (currently amended) The method according to claim 11, wherein:

~~step~~ said (c) comprises injecting gas(es) at least one gas into said interior space of said chamber ~~by means of an~~ using said electrically isolated gas supply ~~means component, having~~ wherein said gas supply component comprises an inlet portion extending exteriorly of said chamber and an outlet portion extending into said chamber via ~~an electrically insulated opening in a wall of said chamber~~ said electrically insulating sleeve.

19. (currently amended) The method according to claim 11, wherein:

~~step~~ said (e) comprises applying one of a DC, AC, ~~or~~ and RF bias potential.

20. (currently amended) The method according to claim 19, wherein:

~~step~~ said (e) comprises applying a selected polarity DC bias potential of up to about 1,000

V.